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Mr. Robert Desmarais, Director
Operations Management Division
U.S. Department of Energy
Brookhaven National Laboratory
Upton, NY 11973

Dear Mr. Desmarais:

**SUBJECT: COMPLETION OF EFFECTIVENESS REVIEWS FOR HSS ES&H
INSPECTION FINDINGS**

This letter serves as the official notice of completion of the effectiveness reviews performed in response to the findings from the Health, Safety and Security (HSS) Inspection of Environment, Safety and Health (ES&H) programs at Brookhaven National Laboratory (BNL).

Background

Over the course of approximately three years, from 2004 through 2007, BNL and the Department of Energy (DOE) embarked on an extensive assessment of the implementation of Integrated Safety Management System (ISMS) at the BNL site. In 2004, a Multidisciplinary Task Force Self Assessment was conducted, followed by a 2004 ISM Assessment by DOE Chicago Support Office. In 2005, an ISM Focused Management Review was conducted by the DOE Chicago Support Office and, in 2006, an ISM Institutional Self Assessment/Onsite Readiness Review was conducted by BNL. The onsite readiness review was performed in anticipation of a planned DOE Office of HSS Inspection of the ES&H programs at BNL.

These assessments were followed by an extensive causal analysis and corrective action process and on May 17, 2006 the resulting corrective actions were organized into a project named the BNL Safety Improvement Plan. A dedicated project manager was assigned to formally track each corrective action to closure and bimonthly status meetings were held with Senior Brookhaven Science Associates (BSA) staff and Brookhaven Site Office (BHSO) Managers where corrective action owners reported on status. Corrective action owners were typically BSA Senior Staff to ensure quality deliverables.

In August and September of 2007, DOE HSS performed an Inspection of the ES&H programs at BNL. The resulting corrective actions from seven findings and compensatory actions were folded into the BNL Safety Improvement Plan.

All corrective actions and effectiveness reviews have now been completed.

Corrective Action Management

The Safety Improvement Plan used a formal corrective action management process. Closure packages were prepared and submitted to BHSO for review and approval before the action could be formally closed by BSA. All corrective action closures were validated by BHSO with the exception of C-4 findings. C-4 findings were generated from causal analyses conducted prior to the DOE HSS Inspection and were therefore managed and validated by BNL. Objective evidence of closure and BHSO concurrence is maintained in the BNL Assessment Tracking System (ATS).

Table 1 contains a brief description of the finding with the corresponding Assessment Tracking System (ATS) number and completion date.

Table 1 – HSS Findings, Assessment Tracking System Number and Closure Date

HSS Findings/Compensatory Measures	Assessment Tracking System Number	Completion Date
C-1 – Communication of ESH and assurance requirements/controls	4015.1 1.1 thru 1.18	10/5/2009
C-2 – Safety control implementation	4015.2 2.1 thru 2.5	3/6/2009
C-3 – Experimental Safety Review and Job Risk Assessment	4015.3 3.1 thru 3.4	3/10/2010
C-4 – Work planning and control (BNL validation)	4015.4 4.1 thru 4.4	4/14/2009
D-3 – Self assessment program	4015.5 5.1 thru 5.5	10/20/2009
D-4 – Event and issues management	4015.6 6.1 thru 6.5	10/20/2009
D-5 – Injury and illness investigations	4015.7 7.1 thru 7.5	5/19/2009
Compensatory Actions	4015.8 8.1 thru 8.16	7/14/2008

Effectiveness Reviews

The Safety Improvement Plan contained provisions for ensuring that corrective actions were effective. Findings C-1, C-2, C-3, C-4, D-3, D-4 and D-5 each contained an action for an independent effectiveness review. The Laboratory completed these corrective actions and evaluated their effectiveness using a range of assessment resources including BNL Independent Oversight, internal SMEs, and external peer reviewers and consultants. Additional actions identified as a result of the effectiveness reviews were incorporated into the ES&H CAP or are managed using the BNL Assessment Tracking System (ATS).

During the course of completing corrective actions to the HSS findings, BNL submitted required annual ISM Declaration and Effectiveness Reviews for FY07, 08 and 09 in

accordance with DOE M 450.4-1 Integrated Safety Management Manual. Each described the overall effectiveness of ISM and were reviewed and approved by BHSO.

Table 2 contains the title of the effectiveness review with the corresponding ATS number and completion date.

Table 2 – Safety Improvement Plan Effectiveness Reviews

Safety Improvement Plan Effectiveness Review	Assessment Tracking System Number	Completion Date
C-1 - Report: Corrective Action Effectiveness review requirements Management and R2A2 Roll up (BNL IO 08-10)	4015.2.5	January 26, 2009
C-2 - Report: Corrective Action Effectiveness review Performance Management (McCallum Turner) Report: Corrective Action Effectiveness review Training and Qualifications (BNL IO 09-01)	4015.2.5	September 30, 2008 February 17, 2009
C-3 - Report: Web Based Experimental Safety Review Process. (BNL IO 09-11)	4015.3.3	January 8, 2010
C-4 - Report: Corrective Action Effectiveness Review Work Planning & Control and Human Performance Initiative(McCallum-Turner)	4015.4	September 30, 2008
D-3 - Report: Corrective Action Effectiveness review Performance Management (McCallum-Turner) Report: Effectiveness Review of Science & Technology Performance Management (McCallum-Turner) Report: Review of Quality Management & Assessments Evaluation Conducted as Part of Well House Extent of Cause Evaluation For Application to HSS Findings D-3 & D-4 (McCallum-Turner)	4015.2.5 4015.9.4 4015.5.7	September 30, 2008 September 30, 2009 September 2009
D-4 - Report: Review of Quality Management & Assessments Evaluation Conducted as Part of Well House Extent of Cause Evaluation For Application to HSS Findings D-3 & D-4 (McCallum-Turner)	4015.6.5	September 2009

D-5 - Report: Line Organization Implementation Effectiveness Injury and Illness Investigations and reporting (BNL IO 09-06)	4015.7.5	April 8, 2009
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Continual Improvement Methods

BNL's commitment to continual improvement is documented in Management Systems, Programs, and when necessary, projects to organize and monitor key actions. Management Systems are BNL's highest-level business and operating process. Program Descriptions, are a road map to the procedures that ensure conformance to stated goals and requirements. Projects are an organized group of corrective actions that require an institutional management approach. Below is a description of key Management Systems, Programs and projects that support continual improvement.

Integrated Assessment Management System: The Integrated Assessment Program (IAP) provides BNL with the necessary feedback processes to support performance-based management, institutional feedback and improvement, and the Contractor Assurance System.

Integrated Planning Management System: BNL's Integrated Planning System (IPS) provides a systematic framework for performance management and continuous improvement. The framework is based on the Plan-Do-Check-Act Cycle for continuous improvement

Quality Management System : The purpose of the Quality Management (QM) System is to embed quality management methodology throughout the various Laboratory management systems and associated processes.

Integrated Safety Management Program Description: The Integrated Safety Management Program Description describes BNL's approach to integrating Environment, Safety, Health, and Quality (ESH&Q) requirements into the processes for planning and conducting work at the Laboratory. It also describes BNL's programs for accomplishing work safely and provides the road map of the systems and processes that make up the BNL Integrated Safety Management System (ISMS).

ISO 14001 and OHSAS 18001 Program Description: The ISO 14001 and OHSAS 18001 programs are based on a continuous improvement model. Within this framework are requirements for self assessment to identify opportunities for improvement.

Projects: During the course of monitoring key trends, events and effectiveness it becomes necessary to develop correctives actions. These corrective actions can be minor course corrections managed by subject matter experts or they may be organized into a project such as the Safety Improvement Plan. Continuing with the Safety Improvement Plan model BNL developed the "Blueprint" for growth and development partly in response to needed ESH improvements. The Blueprint Project fits into five broad categories: organizational changes; leadership effectiveness; engineering, construction and facility management;

safety and operations excellence; and performance management. Each project has a coordinator (or co-coordinators), and a working group to guide its efforts. Progress is monitored continuously and reported on periodically. The specific components of this project can be accessed at the following link <http://intranet.bnl.gov/blueprint/>.

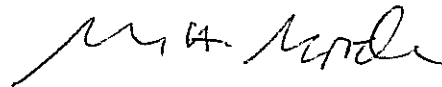
BNL continues to report on ISM strengths, weaknesses and improvements by submission of an annual ISM Declaration and Effectiveness Review in accordance with DOE M 450.4-1. The ESH program continues to improve through ongoing event analysis and effectiveness reviews in accordance with the Quality Management System, specifically the Events and Issues Management Subject Area. In addition, BNL continues to inform BHSO on the status of high level corrective actions through periodic NTS and ORPS reports and on progress of key projects such as "The Blueprint" at periodic meetings.

Conclusion

In response to HSS findings, sixty two corrective actions and seven effectiveness reviews were completed during fiscal years 2006 through 2010. In addition three ISM Declaration and Effectiveness Reviews, describing overall ISM effectiveness, were completed by BNL and approved by BHSO. Recent statistics show that BNL's injury rates are at their lowest in over eight years suggesting that these corrective actions and other improvements are effective. BNL is encouraged by this positive trend and will continue to make the necessary adjustments to continually improve ISM effectiveness.

Should you have any questions or concerns, please contact me at extension 4549 or John Selva at extension 8611.

Sincerely yours,



George A. Goode
ALD, ESH (Interim)

cc:

J. Cracco, SC-BHSO
M. Bebon, BSA
S. Coleman, BSA
R. Lebel, BSA
R. Lee, BSA
E. Nowak, BSA